

C
M 2825
1921

The Maine Bulletin

Entered at the Post Office at Orono as second class matter
Published monthly during the academic year

Vol. XXIII

University of Maine, Orono, Maine, March, 1921

No. 8

Announcement of the Twenty-first Session

of the.

Summer Term

of the

University of Maine

June 27—August 5, 1921



PRINTED AT THE
UNIVERSITY PRESS
ORONO, MAINE



THE CLOCK TOWER AND CHAPEL BELL

SUMMER TERM CALENDAR

June	4-6	University of Maine Commencement Exercises.
June	27	Registration.
June	28	First Chapel. Instruction begins in all courses.
July	1	Reception to students. Gymnasium.
July	4	Independence Day, a Holiday.
August	3	Class instruction ends.
August	4-5	Summer Term Examinations.
September	13	Registration for fall semester begins.

The Faculty

ROBERT JUDSON ALEY

President

A. B., Indiana, 1888; A. M., 1890; Ph. D., Pennsylvania, 1897; LL. D., Franklin, 1909; Pennsylvania, 1917. Principal high school, Spencer, Ind., 1882-85, 1886-87; instructor in mathematics, Indiana, 1887-88; professor of mathematics, Vincennes, 1888-91; Indiana, 1891-1910; Harrison Fellow, Pennsylvania, 1896-97; acting assistant professor of mathematics, Stanford, 1894-95; superintendent of public instruction, State of Indiana, 1909-10; president, Maine, Dec. 1, 1910—.

JAMES NORRIS HART

Mathematics

B. C. E., Maine, 1885; C. E., 1890; M. S., Chicago, 1897; Sc. D., Maine, 1908. Principal, Dennysville high school, 1885-86; instructor in mathematics and drawing, Maine, 1887-1890; professor of mathematics and astronomy, 1891—; dean of the University, 1903—.



JAMES STACY STEVENS

Physics

Director of the Summer Term

B. S., Rochester, 1885; M. S., Syracuse, 1889; LL. D., Rochester, 1907. Principal, village school, Jasper, N. Y., 1885-86; instructor in sciences, Cook Academy, Havana, N. Y., 1886-91; graduate student, Chicago, 1895-96; professor of physics, Maine, 1891—; dean of the College of Arts and Sciences, 1905—.

DEAN STEVENS

GEORGE DAVIS CHASE

Latin

A. B., Harvard, 1889; A. M., 1895; Ph. D., 1897; Harvard traveling fellow, Leipzig, 1897-98. Sub-master and teacher of Latin and mathematics, Bristol Academy, Taunton, Mass., 1889-94; teacher of Latin, Lawrenceville School, Lawrenceville, N. J., 1898-99; assistant professor of comparative philology, Cornell, 1899-1901; instructor in Latin, Wesleyan, 1901-02; associate professor of Latin, 1902-05; professor of Latin, Maine, 1905—.

ROY MERLE PETERSON

Spanish

A. B., Coe, 1906; A. M., Harvard, 1910; Ph. D., 1912. Study and travel in southern Europe, 1915-17. Teacher in Oskaloosa, Iowa, High School, 1906-07; Eureka College, 1907-09; professor of Latin, Missouri Valley College, 1912-14; professor of Spanish and History, Cooper College, 1914-15, 1917-18; professor of Spanish and Italian, Maine, 1918—.

HARLEY RICHARD WILLARD

Mathematics

B. A., Dartmouth, 1899; M. A., 1902; also Yale, 1910; Ph. D., Yale, 1912. Principal of high and graded schools, Orleans, Vt., 1899-1900; assistant in physics, Dartmouth, 1900-02; instructor in mathematics, Kenyon Military Academy, Gambier, Ohio, 1902-04; instructor in mathematics, Maine, 1904-07; assistant professor, 1907-09; university fellow, Yale, 1909-11; instructor in mathematics, Yale, 1911-12; assistant professor, Maine, 1912-13; associate professor, 1913-1919; on leave of absence with U. S. Food Administration and War Trade Board, 1917-1919; professor, 1919—.

JOHN H ASHWORTH

Economics and Sociology

A. B., Emory and Henry, 1906; Ph. D., Johns Hopkins, 1914. Principal of high school, Wise, Va., 1906-1911; fellow, Johns Hopkins, 1912-14; instructor in economics, Penn. State, 1914-1915; professor of economics and political science, Penn. College, 1915-1918; professor of economics and sociology, Ohio Wesleyan, 1918-1919; professor of economics and sociology, Maine, 1919—.

CHARLES ANDREW BRAUTLECHT

Chemistry

Ph. B., Yale, 1907; Ph. D., Yale, 1912; Chemist in Protein Research and State Analytical Laboratories, Connecticut Agricultural Experiment Station, 1906-1909; Assistant in Chemistry, Yale, 1910-1912; instructor in chemistry, Throop College of Technology, 1912-1913; professor of chemistry, Florida State College, 1913-1919. Commercial investigations, analytical and consulting work in chemistry in New Haven, California, and Florida. Professor of chemistry, Maine, 1919—.

HAROLD MILTON ELLIS

English

B. A., Maine, 1907; M. A., 1908; A. M., Harvard, 1909; Ph. D., 1913. Instructor in English, Muhlenberg College, Allentown, Pennsylvania, 1909-1911; Texas, 1913-1917; professor of English, Trinity College, North Carolina, 1917-1919; North Carolina, Summer, 1919; Maine, 1919—.

MYRON OTIS TRIPP

Mathematics

A. B., Indiana, 1901; Ph. D., Columbia, 1909. Instructor in mathematics, National Forum School, Douglastown, Penn., 1901-1902; tutor in mathematics, College of the City of New York, 1903-1908; instructor, 1908-1912; instructor, High School of Commerce, New York, 1912-1913; professor, Miami (Indiana) Normal School, 1913-1914; Olivet, 1914-1917; assistant professor, Maine, 1917-1919; associate professor, 1919—.

LUTHER JOHN POLLARD

Education

B. A., Lawrence College, 1910; M. A., Wisconsin, 1915; summer work, Wisconsin, 1915. Superintendent at Williams Bay, Wisconsin, 1910-1913; principal Marengo Illinois High School, 1913-1914; professor of education, Lombard College, 1915-1920; professor of education, Maine, 1920—.

WILLIAM DAVID FULLER

Education

Ph. B., Wisconsin, 1910; A. M., Maine, 1917; graduate student, California, 1912; Chicago, Summer of 1914; Columbia, Summer of 1918. Principal of Township High School, Eagle River, Wisconsin; 1902-1906; head master of boys at Hillside Home School, 1906-1909; superintendent of schools, Sparta, Wis., 1911; instructor in high school, Berkeley, Cal., 1912; Superintendent of schools, Hudson, Wis., 1912-1914; superintendent of schools, Old Town-Orono, 1914-1918; lecturer on education, Prince of Wales College, summers, 1915 and 1916; assistant professor of education, Maine, summers, 1916 and 1917; professor of education, Maine, 1918; superintendent of schools, Portland, 1918—.

ALBERT LEWIS FITCH

Physics

A. B., Albion College, 1911; A. M., 1912; Fellow, Michigan, 1912-1913; Science teacher in High School, Allegan, Mich., 1913-1915; Fellow, Michigan, 1915-1916; Ph. D., 1916. Research physicist Western Electric Co., N. Y. City, 1916-1919; associate professor, Maine, 1919; professor, 1920—.

FRANÇOIS JOSEPH KUENY

French

B. ès L., Paris, 1897; L. ès L., Bescançon 1901; professeur de rhétorique, Bescançon, 1902-03; professeur de philosophie, Troyes,

1903-04; professeur de seconde; Juilly, 1904-07; Berlitz School of Languages, Philadelphia, 1907-08; head of Berlitz School of Languages, Cincinnati, 1908; graduate student, Columbia, 1913-14; instructor in romance languages, Maine, 1914-16; assistant professor, 1916-20; associate professor, 1920—.

BERTRAND FRENCH BRANN

Chemistry

B. S., Maine, 1909; M. S., 1911; M. S., Massachusetts Institute of Technology, 1912. Instructor in chemistry, Maine, 1910-1911; assistant in chemistry, Massachusetts Institute of Technology, 1912-1913; instructor in chemistry, Lowell Textile School, 1913-1917; assistant professor, Maine, 1917-1919; associate professor, 1919—.

ALBERT AMES WHITMORE

History

B. S., Maine, 1906; M. A., 1917. Graduate student, Harvard Summer School, 1920. Teacher of history, Racine, Wisconsin, High School, 1906-11; head of Department of History, Appleton High School, 1911-15; instructor in history, Maine, 1915-17; assistant professor, 1917—.

MARION STEPHANIE BUZZELL

French

B. A., Maine, 1914; M. A., 1915. Teacher of French, Berlin, New Hampshire, 1917-19; instructor in French, Maine, 1919—.

TRUE CLIFFORD MORRILL

Education

B. A., Bates, 1907; M. A., Columbia, 1919. Teacher of sciences, Bridgton Academy, 1907-08; in charge of science department, Gardiner High School, 1908-12; superintendent of schools, Norway-Waterford district, 1912-20; superintendent of schools, Bangor, 1920—.

LOUIS JULIUS WALDBAUER

Chemistry

B. Ch., Cornell, 1917. Chemist with E. I. du Pont Co. and at Redpath laboratories, 1917-20. Instructor in chemistry, Maine, 1920—.

The University of Maine is situated in the heart of that state which, by reason of its almost ideal summer climate and the beauty of its rivers, lakes, forests, and mountains, has earned the title "The Playground of the Nation." The University campus is beautifully situated, overlooking the Stillwater River, a branch of the great Penobscot; and with its walks shaded with evergreens and its ivy-covered buildings, is one of the most attractive summer spots in New England.

The University town, Orono, is conveniently situated for travel from all parts of the state, being in direct communication by electric and steam

railways with the city of Bangor, eight miles down the river. Students coming from southern New England or the Middle and Southern States may enjoy one of the most delightful water trips in America by taking the steamboat at Boston and sailing up the beautiful Penobscot Bay and River in the early morning and early forenoon.



A ROW OF FRATERNITY HOUSES

THE TEACHERS' UNIVERSITY

The Summer Session of the University is essentially an institution for the benefit and advancement of teachers. At the end of a hard year's work in June, most teachers feel the need of change and recreation during the summer months. On the other hand, desire for promotion in their profession and the increasing and reasonable requirements of school systems and superintendents for frequent attendance at institutes of higher learning for the refreshing and increasing of the teachers' mental equipment urges them to extra effort in the vacation period.

The following school people will find work to suit their needs: (1) *Superintendents* and those preparing to be superintendents will find all the professional subjects which the State Department of Education requires in the examination of superintendents. Superintendents' Clubs will be organized for the purpose of discussion of practical problems. The up-to-date plans of educational organization and administration will be available. (2) *Secondary school teachers* or prospective secondary school teachers will find the courses to fit their needs in professional training and subject matter. High school teachers who desire to prepare themselves for better positions in more advanced work will find available work in the Summer Term. (3) *Normal school graduates* desiring to complete the college curriculum leading to the degree of Bachelor of Pedagogy may do a part of this work in the Summer Term. Graduates of Maine normal schools who are graduates of an accredited high school may earn the degree of Bachelor of Pedagogy by completing two years' college work. This is a recent regulation of the university. A number of normal school graduates are taking advantage of it.

SUMMER TERM AND STATE EDUCATIONAL SYSTEM

The College of Arts and Sciences at the University of Maine has arranged for the establishment of a course for the professional training of secondary school teachers, which will entitle those who complete it to a Professional State Certificate for Secondary School Teachers. The course has been arranged in conference with the State Superintendent of Public Schools and has his endorsement.

In addition to fulfilling the general requirements leading to the degree of Bachelor of Arts, the student is expected to complete six hours in psychology in the sophomore year as a prerequisite to twelve hours work in education in the junior and senior years, thirty hours in a major subject, and from ten to twenty hours in a minor subject. The prescribed work in education includes three hours in the history of education, three hours in the principles of secondary education, three hours in the technique of teaching, and three hours to be elected from the three following subjects: adolescence, pedagogy and psychology of high school subjects, and practice teaching.

The selection of a major subject to which the student devotes 30 hours and a minor subject to which he shall devote from 10 to 20 hours is desired to equip him for teaching two allied subjects in high school. Usual combinations of high school subjects are English and history, Latin and history, English and Latin, mathematics and physics, physics and chemistry. For the completion of this course a high standard of scholarship is required. All the prescribed work must be of "C" grade or above. Upon completing this course the student will receive a Professional Secondary Certificate from the State Department of Public Instruction which will designate the major and minor subjects which he has pursued. A special certificate will also be issued by the university which will give a detailed outline of the student's record.

So far as possible facilities will be offered in the Summer Term to teachers who may desire to obtain such certificates in accordance with the plan outlined above. Details of the plans and an outline of the course extending through several Summer Terms will be sent to those who are interested.

A NEW STATE LAW

A recently enacted law of the State of Maine as interpreted by the State Department of Education provides that: "After September, 1920, teachers entering the service in preferred grade A High Schools shall have professional training equivalent to 12 semester hours of education."

"After 1921 each teacher shall give evidence of having pursued summer school courses or an equivalent in extension courses or private professional study in each three year period."

The Summer Term of the University of Maine is ready to cooperate with teachers in meeting the requirements of this law.

GRADUATE STUDENTS

Arrangements have been made in several of the departments whereby graduates of the University of Maine and other institutions of equal grade may register for work in consecutive Summer Terms which will lead to the degree of Master of Arts. Four terms will normally be required to fulfill the requirements for the degree. A student who is able to spend one semester in graduate study at the university may complete the work leading to the master's degree in two Summer Terms.



MAIN ENTRANCE TO THE CAMPUS

COLLEGE STUDENTS

Students of the university and other institutions who, for various reasons, are in arrears in their work, or who may wish to gain additional credits in their course, find the Summer Term profitable. For such students the opportunity is offered to register for elective subjects which they would regularly take in their college curricula.

REGISTRATION BUREAU

There has been organized at the university a registration bureau for teachers and students who are planning to become teachers. A complete set of blanks is furnished each applicant and the university authorities assist the students in obtaining positions so far as they are able. The privilege of this bureau will be extended to students in the Summer Term and this should prove of aid to students and teachers who are hoping to obtain better positions.

COURSES OF STUDY

Courses are arranged to give university credit to students who desire it. As a rule, a course which meets daily during the summer term is counted as equivalent to a course which meets twice a week for one semester. Courses which are scheduled for less than five times a week during the Summer Term will be estimated up on the proper time basis. So far as possible the courses are given numbers which correspond with those in the university catalog, with the letter *s* added.

ADDITIONAL COURSES

If there should be sufficient demand for them other courses than those described in this bulletin will be offered. Arrangements have been made for work in music, psychology, German, and other courses will be added if it seems advisable.

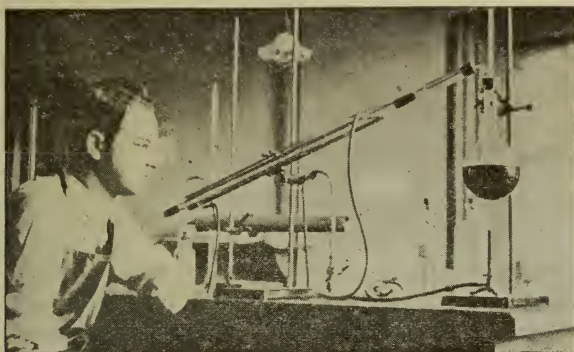
CHEMISTRY

PROFESSOR BRAUTLECHT; ASSOCIATE PROFESSOR BRANN; MR. WALDBAUER

The department offers its facilities for all who wish to undertake any studies in chemistry. Courses may be taken for credit but the department does not lose sight of the fact that many students of science would like the opportunity of undertaking special work under direction. With this object in view only a few laboratory courses are listed, but any ordinary work may be taken by individuals and the department will give all possible credit for and aid to such work. If there is a sufficient demand, courses other than the listed ones will be given.

It is possible that the department may offer work which would partially fulfill the requirements for the master's degree. Intending students would do well to communicate with the department on this matter beforehand.

61s. THE TEACHING OF CHEMISTRY.—A course intended to aid those who are already teaching chemistry and for those who, properly qualified, may wish to enter this field. The subject will be studied from the laboratory as well as the classroom standpoint and there will be ample



A CHEMICAL LABORATORY

opportunity for informal discussion. It will deal essentially with the more important phases of general chemistry.

1s. GENERAL CHEMISTRY.—A course of lectures and demonstrations on elementary chemistry. No previous knowledge of the subject is assumed, so that the beginning student may take the course; on the other hand, the development is such that the course will serve as a review as well as an introduction to new matter for those who desire further work in general chemistry. The course deals chiefly with the non-metals.

2s. GENERAL CHEMISTRY.—A continuation of Course 1s dealing chiefly with the metals.

5s. Laboratory work in the field covered by Course 1s.

6s. Laboratory work in the field covered by Course 2s.

11s. QUALITATIVE ANALYSIS.—A systematic study of reactions and separation of the more common metals and acids. The character of this course may be made to meet the needs of any student as the work is almost entirely individual. Twenty hours weekly yielding five semester credits. General Chemistry is a prerequisite.

15s. ORGANIC CHEMISTRY.—This course is designed for those who wish an elementary knowledge of organic chemistry. Teachers will find that it may broaden their horizon and pre-medical students may find the course to their advantage. It will be regarded as the equivalent of Ch 15 for pre-medical students. Twenty hours weekly yielding five semester credits.

74s. PHYSICO-CHEMICAL MEASUREMENTS.—The determination of molecular weights; the study of solutions thru conductivity and other methods; the use of such instruments as the spectroscope, polariscope, and the refractometer.

If sufficient demand exists, courses in pulp and paper chemistry and technology may be given by one of our regular pulp and paper specialists.

ECONOMICS AND SOCIOLOGY

PROFESSOR ASHWORTH

1as. **ELEMENTARY PRINCIPLES OF ECONOMICS.**—An introductory course dealing with the general principles and problems of modern economic activity.

61s. **AMERICAN GOVERNMENT.**—The principles and interpretation of the American government in the light of which current political problems will be studied.

72s. **LABOR PROBLEMS.**—The industrial revolution and the development of the modern conflict between capital and labor; history, aims, policies, and methods of trade unions; present day industrial problems: woman and child labor, immigration, wages, hours of labor, working-men's insurance, and agencies of industrial peace.

Other courses as outlined in the catalog will be given if there is a sufficient demand for them.

EDUCATION

PROFESSOR POLLARD; MR. FULLER; MR. MORRILL

51s. **HISTORY OF EDUCATION.**—Historic Foundations of Modern Education. The principles underlying modern educational theory and practice. A survey of the history of education from the primitive peoples to the Renaissance.

62s. **SCHOOL ADMINISTRATION.**—This course deals with the problems of the superintendent and is open to superintendents and those planning to enter the field of superintendency. Students should bring any problems, reports, or data that they wish introduced. The course will be made as practical as possible. The following topics are suggested: making reports; figuring costs; the use of statistics; selection and rating of teachers; powers and duties of the superintendent; powers and function of the school committee; salary schedules; relation of the school to the community; Americanization. Lectures, readings, and reports.

64s. **SUPERVISION OF INSTRUCTION.**—This course is designed for superintendents and teachers of elementary and junior high schools. It treats the problems of curriculum making; aims and methods of instruction in various subjects; measuring progress; determining standards of efficiency; type lessons; teacher training; relation of the content, practice, and methods of various subjects in training for citizenship; aims and functions of the recitation period. Lectures, readings, and reports.

71s. **PSYCHOLOGY OF SECONDARY EDUCATION.**—A study of the adolescent age and of the general psychological principles which determine the scope and character of secondary education.

77s. **TECHNIQUE OF TEACHING.**—This is a course including the principles of class management and general methods of teaching. The class room is viewed as a workshop. The technique of learning and mental work as found in school room activities will be studied, including methods of drill and habituation, questioning, presentation of material, lesson plans and aims. This course will include methods of teaching children to study and work. It is designed for secondary teachers. Courses 51s, 52s, and 77s are required for the State Secondary Professional Certificate for Teachers.



FERNALD HALL—EDUCATION AND MODERN LANGUAGES

90s. **EDUCATIONAL MEASUREMENT.**—An intensive study of the standard-test movement in education; a brief historical perspective; principles underlying the demand for standards; attempts to standardize the content of the course of study; an organization of the principal tests designed to measure the outcomes of specific studies in elementary and secondary curricula; a critical discussion of the validity of the tests; principles of design and methods of construction; the use of standard tests to the administrator, to the teacher, and to school surveyors.

101, 102. **SEMINAR IN EDUCATION.**—Assigned topics and reports made by members each meeting.

ENGLISH

PROFESSOR ELLIS; ASSOCIATE PROFESSOR THOMPSON

1s. COMPOSITION AND RHETORIC.—This course is the equivalent of the regular work of the fall semester of the freshman year. A review of the fundamentals of good writing, sentence structure, and paragraphing, with a study of the expository type of composition. Frequent themes and conferences.

2s. COMPOSITION AND RHETORIC.—This course corresponds to the work of the spring semester of the freshman year. Stress is laid upon narration and description.

57s. SHAKESPEARE.—A study of Shakespeare's background and development as a dramatist and of a few representative plays. Several others are required to be read.

62s. CONTEMPORARY ENGLISH DRAMA.—A study of the chief dramatic works of the past thirty years in England, Ireland, and America.

69s. THE TEACHING OF ENGLISH.—Several representative classics from the ordinary high school English curriculum will be studied intensively from the teacher's viewpoint, with the purpose of cultivating the teacher's own appreciation and understanding of literature and of suggesting effective methods of presentation. Compositions will be written and the problems of grading and correcting studied.

71s. AMERICAN LITERATURE.—A historical outline. Lectures, recitations, and assigned readings.

FRENCH

ASSOCIATE PROFESSOR KUENY; MISS BUZZELL

1s. ELEMENTARY FRENCH.—For beginners and those who wish to review the elements of French grammar, and to obtain the foundation of a French vocabulary for reading the language.

5s. ADVANCED FRENCH.—Open to students who have had three years of secondary school French. Rapid reading, composition, and conversation.

7s. ELEMENTARY CONVERSATION AND COMPOSITION.—Open to students who have studied an elementary French grammar. Conducted in French and designed to enable the student to make ready use of simple French phrases. Special attention given to pronunciation.

11s. REVIEW OF FRENCH GRAMMAR.—For teachers. A more thorough study of the principal difficulties, especially of those encountered in the use of the verbs and pronouns.

59s. HOW TO WRITE FRENCH.—An advanced course in composition. Retranslation exercises and free composition.

109s. VOLTAIRE.—A study of the literary movement of the eighteenth century with special reference to Voltaire.

HISTORY

ASSISTANT PROFESSOR WHITMORE

1s. MEDIEVAL HISTORY.—A general course covering the period from the fourth century to 1500. This is the same as the regular course found in the catalog, given more briefly and carrying two hours credit instead of three.

3s. HISTORY OF ENGLAND.—From early times to the beginning of the Stuart period. This will be the same in both subject matter and credit as stated in catalog.

55s. UNITED STATES HISTORY.—A study of the period following the Civil War thru the Roosevelt administration.

LATIN

PROFESSOR CHASE

8s. TEACHERS' COURSE.—A discussion of methods and problems of teaching Latin in the several years of the high school course. Study of topics from Caesar, Cicero, and Vergil. Intended for those who are teaching or who expect to teach secondary school Latin.

10s. CICERO.—Reading of some work of Cicero. Intended to give added familiarity with Cicero's style and a better knowledge of his range of thought. Adapted to teachers and college students.

12s. HORACE.—Reading of selections from Horace. A study of the poet, his poetry, and his times.

51s. LATIN COMPOSITION.—Practice in writing Latin with a careful review of Latin syntax.

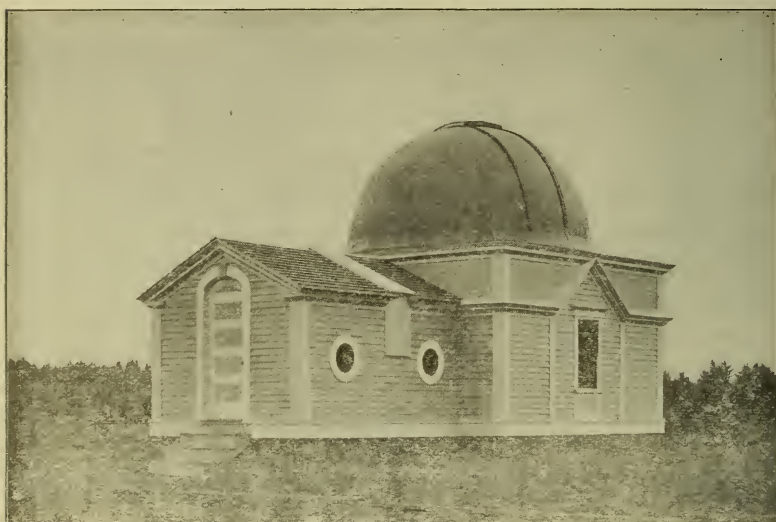
MATHEMATICS AND ASTRONOMY

PROFESSOR HART; PROFESSOR WILLARD; ASSOCIATE PROFESSOR TRIPP

Courses A and B are planned to meet the needs of high school teachers who wish to review the subjects, or to study methods of teaching. Courses 1s, 3s, 6s, 7s, 8s, 10s, should appeal to teachers of high school mathematics who wish to extend their field of mathematical knowledge or to become candidates for a degree.

Courses 1s to 53s inclusive may be counted towards graduation. Courses 101s is graduate work. Under certain conditions Courses 51s and 53s may be counted toward the Master's degree.

AS. TEACHERS' COURSE IN ALGEBRA.—A course intended for teachers in preparatory schools and dealing chiefly with the second year's work. Special attention will be given to the methods of presenting the subject and those topics will be emphasized that are most important in preparation for college work.



THE OBSERVATORY

BS. TEACHERS' COURSE IN GEOMETRY.—A review of the more important theorems, with practice in the demonstration of original propositions and in the solution of numerical exercises. Discussion of text-books and of methods of presenting the subject.

2s. SOLID GEOMETRY.—This course is offered especially for the benefit of students who intend to enter college but have not been able to complete the requirements in solid geometry. The Stone-Millis Solid Geometry will probably be used as the text-book, but Phillips and Fisher's, Wells's, and other books will be used for reference.

1s. PLANE TRIGONOMETRY.—The elements of plane trigonometry, including the solution of right and oblique plane triangles, and of problems in surveying, together with the use of surveying instruments. Those having logarithmic tables should bring them, and also any modern text-book on trigonometry which may be useful for reference.

3s. COLLEGE ALGEBRA.—The theory of quadratic equations, the binomial theorem and so much of the regular freshman course in algebra as time will permit.

6s. ANALYTIC GEOMETRY.—A brief course covering the elements of this subject.

7s. DIFFERENTIAL AND INTEGRAL CALCULUS.—A course intended for teachers in preparatory schools, who wish to gain a knowledge of the elements of this subject.

8s. INTEGRAL CALCULUS.—The equivalent of Course 8 of the catalog. Open only to those who have previously studied the subject.

10s. DESCRIPTIVE ASTRONOMY.—Lectures accompanied by work in the observatory. The only mathematics required is an elementary knowledge of geometry and plane trigonometry. The department is well equipped with instruments and apparatus for the teaching of both descriptive and practical astronomy.

51s. ADVANCED ANALYTIC GEOMETRY.—A course for students who have taken analytic geometry and differential and integral calculus.

53s. ADVANCED CALCULUS.—Equivalent to a part of Course 53 of the catalog.

101s. THEORY OF FUNCTIONS.—Equivalent to a part of Course 101 of the catalog.

By suitable selection of topics a candidate should be able to complete the work for the master's degree in four or five summer terms, the exact time depending upon his mathematical ability and previous mathematical preparation.

The department is supplied with a small but carefully selected list of mathematical models, and, for work in astronomy, has an observatory equipped with an eight inch Clark equatorial, a three inch Bamberg astronomical transit, and other instruments.

Eight or more of the above courses will be given, the choice of subjects depending upon the number of students electing them. All who can do so are requested to indicate their choice before the opening of the term.

PHYSICS

PROFESSOR STEVENS; PROFESSOR FITCH

9s. ELEMENTARY LABORATORY COURSE.—This includes a list of experiments which would be accepted for admission to the University of Maine. The course is especially adapted for teachers who wish to become familiar with the methods of conducting an elementary laboratory course. The complete set of apparatus is assembled in the laboratory, and full directions are given for performing each experiment.

1s. COLLEGE PHYSICS.—A course based upon those parts of Anderson's College Physics which treat of mechanics, heat, and sound. This

course may be taken for credit only by university students who have covered the ground in Physics 1.

2s. COLLEGE PHYSICS.—A course based upon those parts of Anderson's College Physics which treat of electricity and light. This course may be taken for credit only by university students who have covered the ground in Physics 2.

4s. THE GENERAL LABORATORY COURSE.—The subjects usually included in an undergraduate course. Especial attention is given to the reduction of observations and the tabulation of results.

10. TEACHERS' COURSE.—A course covering the whole ground of Elementary Physics in a rapid survey. It is planned to be of aid to secondary school teachers, and arrangements may be made so that those to whom this work is a review may obtain college credit in the course for students in the College of Arts and Sciences.

51s. ADVANCED LABORATORY COURSES.—These courses are offered in optics, electrical measurements, and heat. They are of a more advanced nature than those in number 4s which is prerequisite for them.

101s. ADVANCED LABORATORY COURSE FOR GRADUATE WORK.—This course will be adapted to the requirements of the students, and will be offered to such students as have completed the courses above listed. The work will be in the nature of a repetition of a published experiment, or it may be an original investigation.



THE STILLWATER RIVER FROM THE CAMPUS

SPANISH

PROFESSOR PETERSON

1s. ELEMENTARY SPANISH.—Designed for beginners and for those who wish to review the essentials of the language. Moreno-Lacalle's *Elementos de Español* will be used as text.

2s. **ELEMENTARY SPANISH.**—Designed for those who have had the equivalent of one year of High School Spanish. Grammar, reading, conversation and composition.

4s. **COMPOSITION AND CONVERSATION.**—At least one year of College Spanish is a prerequisite for this course. Reading, dictation, conversation and translation from English into Spanish.

9s. **THE SPANISH AMERICAN COUNTRIES.**—This course, which will be conducted wholly in English, will deal with the customs and manners of life and the various phases of Latin American civilization. A study of business conditions and commercial opportunities. Lectures, reading, and reports. No knowledge of Spanish is required for this course and it can not be counted to make up language credits.

61s. **THE SPANISH DRAMA.**—A study of representative works of the Golden Age and the rapid reading of modern plays.

These courses may be varied somewhat to suit the needs of students and any course may be omitted for which there is not sufficient registration. Those who plan to take work in Spanish are invited to communicate with Professor Peterson before the opening of the session.

MISCELLANEOUS INFORMATION

DAILY ASSEMBLY

Each morning except Saturdays and Sundays the faculty and students meet in the Chapel at 10.00 for a brief assembly. A short religious service is held, including a song service, and an address will be given on some topic of current interest.



THE CHAPEL

LIBRARY

Thruout the Summer Term, the university library of 68,000 volumes, and the reading rooms containing about 400 periodicals and newspapers,

will be opened from 8 A. M. to 12 M. and from 1.30 P. M. to 5 P. M. daily, except Saturday afternoons and Sunday. The library privileges ordinarily accorded university students, including the home use of books, are extended to students in the Summer Term.

LABORATORIES, MUSEUMS, AND OBSERVATORY

The laboratories of the departments of Physics and Chemistry will be available for use of the students. All necessary apparatus is supplied to the student without charge; a small charge is made to cover the cost of the articles used. The departments are well equipped with modern apparatus.

The Museum is illustrative of the rocks, flora, and fauna of Maine, and will be open at stated periods for the use of the students.

The Observatory contains an eight-inch telescope, vertical circle, and other instruments of precision.



FINISH OF THE QUARTER MILE

RECREATION

The athletic field of the university will be accessible to those who wish to enjoy outdoor exercise, and two afternoons from four to six will be set aside each week for baseball games and other athletic events. A tennis tournament also will be organized.

Under the management of a committee appointed for that purpose, tramps, picnics, and longer trips to neighboring places of interest will be arranged, as well as more informal occasions on the campus where the students will have opportunity to meet each other and the members of the faculty.

Orono and the surrounding country offers unsurpassed opportunities for tramping, canoeing, fishing, motoring, and week-end trips.

Pushaw Lake, six miles from the campus, makes an ideal day's outing. Canoes may be rented at the Niben Club or at Gould's Landing. Chemo Lake, which is the source of Orono's water supply is at the head of Chemo Stream and can be reached by canoe after a two mile tramp from the campus, after crossing the Penobscot river by ferry. Canoes may be hired from the ferryman. Gilman Falls, the old Veazie Railroad, and Poplar Knoll are all delightful tramps for picnic parties.

Bar Harbor, Maine's popular summer resort, is easily reached from Orono, and a trip to Mt. Katahdin, Maine's highest mountain, is well worth an extra week in Maine. Historic Castine is reached after a four

hour sail down the Penobscot river, and Northport, Camden, and Rockland are reached by the Boston boat which makes daily trips from Bangor. The Indian Reservation at Old Town attracts many summer visitors where Indian-made baskets, snowshoes, and moccasins may be purchased. The Stillwater river which bounds the campus on the west affords canoeing and swimming.



BASE BALL

For the further entertainment of the Summer Term students and their friends, the gymnasium will be opened one evening of each week, where music will be furnished and opportunity afforded for informal social intercourse.

The social life of the Summer Term and the athletic interests are in charge of committees composed of members of the faculty and student body.

EXPENSES

Tuition

Tuition for the term of six weeks, covering all charge for instruction up to fifteen hours a week, use of library and laboratories, except a small additional fee covering cost of materials used in the laboratories:

For residents of Maine, \$20.00.

For residents of other states, \$25.00.

An additional charge of \$1 an hour is made for registration in excess of fifteen hours a week.

Rooms in the Dormitories

Hannibal Hamlin Hall will be open for men students and Balentine Hall for women students. Rooms may be obtained for \$2.00 a week for a single person, or for \$1.00 each when more than one occupy a room. Students should furnish pillows and pillow cases, sheets, and towels.

Meals

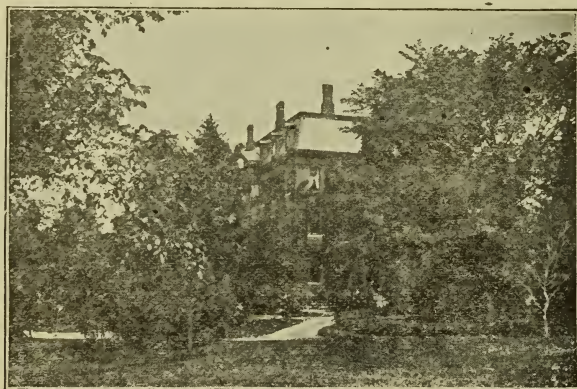
Meals will be served in the dining room of Balentine Hall for men and women at a cost of \$7.00 a week.

The University Inn, located in the village of Orono, is under university management and is open for summer students. Rooms in private families may be secured by those who prefer them.

Men who wish to bring their families should write early. Special effort will be made to secure suitable accommodations.

Self Boarding

An effort will be made to meet the needs of students who may wish to reduce expenses by forming clubs and doing light housekeeping. Tenting on the campus has proved attractive to students.



ONE OF THE MEN'S DORMITORIES

SPECIAL REGULATIONS

The Summer Term is organized under a distinct faculty composed of the members of the university faculty engaged in teaching in the Summer Term, and such other instructors as may be employed for the purpose. The Dean of the College of Arts and Sciences is the administrative officer.

Courses meeting five hours a week for new work give credit of two semester hours. Courses which are taken as review courses may be credited for their original semester value.

Courses offered primarily for graduate credit may be organized to count for three semester hours credit.

The maximum registration allowed without special permission is fifteen hours a week, equivalent to three new courses for which credit

for two semester hours each is allowed, or two new courses, for which credit of three semester hours each is allowed.

All cases of over-registration will be passed upon by a special committee appointed for this purpose.

Final examinations will be scheduled in two-hour periods beginning Thursday at 2 P. M., and ending Friday noon.

Recitations begin at 7.30 and close at 12.00. Each period will be 50 minutes, and there will be 20 minutes allowed for chapel services.

Students who have had three or more absences from a subject which comes five times a week, or like proportion of absences in subjects which are scheduled for a less number of hours a week, must present excuses for all their absences to the committee on attendance before 4 P. M. of the last Wednesday of the term. If desired, they may appear personally before the committee and present their excuses.

SUMMER TERM COMMITTEES

CHAPEL: Stevens, Ellis, Fuller

SOCIAL: Kueny, Thompson, Buzzell, Whitmore

ATHLETICS: Fitch, Brann, Waldbauer

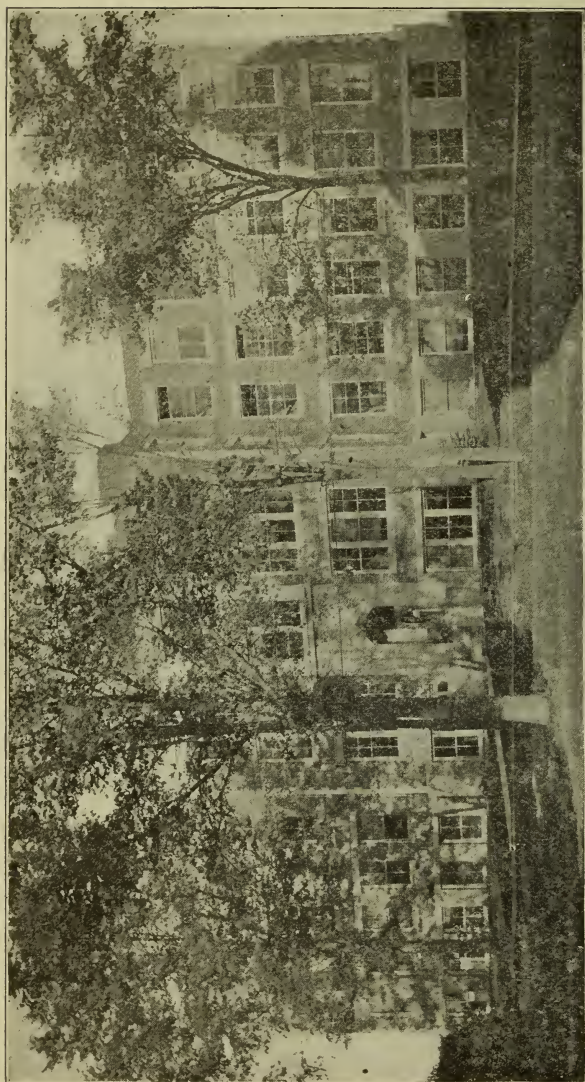
REGISTRATION: Chase, Ashworth, Brautlecht

ATTENDANCE: Willard, Peterson, Tripp

IN GENERAL

Prospective students are invited to consult Dean Stevens, or any of the instructors, for further details regarding the courses, or upon any subject relating to the work. It is the purpose of the authorities to offer such courses as will be most useful to the teachers and others who may desire to pursue them.

In case the registration for any course offered falls below a certain minimum, it may be withdrawn.



AUBERT HALL—CHEMISTRY AND PHYSICS
OFFICE OF THE DIRECTOR OF THE SUMMER TERM

TIME	CHEMISTRY	ECONOMICS	EDUCATION	ENGLISH	FRENCH
7:30	5s Lab. Chem.	1as Prin. of Ec.	71s Psych. of Sec. Educ.	2s Comp. and Rhet.	109s Voltaire
	6s Lab. Chem.		101s Seminary		
	11s Qual. Anal.		77s Tech. of Teach. School Admin.	71s Amer. Lit.	5s Adv. French
8:20	5s Lab. Chem.	72s Labor Probs.	62s		
	6s Lab. Chem.		90s Educ. Measts.	69s Teachers Course	11s Rev. of French Gram.
	11s Qual. Anal.			62s Contemporary Eng. Drama	
9:10	1s Gen. Chem.	61s Amer. Govt.			
	15s Org. Chem.		64s Supervision of Instruction	57s Shakespeare	1s Elem. French
	74s Ph. Ch. Methods				7s El. Conv. and Comp.
10:20	11s Qual. Anal.				
	15s Org. Chem.		51s Hist. of Educ.	1s Comp. and Rhet.	59s How to write French
	74s Ph. Ch. Methods				
11:10	11s Qual. Anal.				
	61s Teachers' Course				
	2s Gen. Chem.				

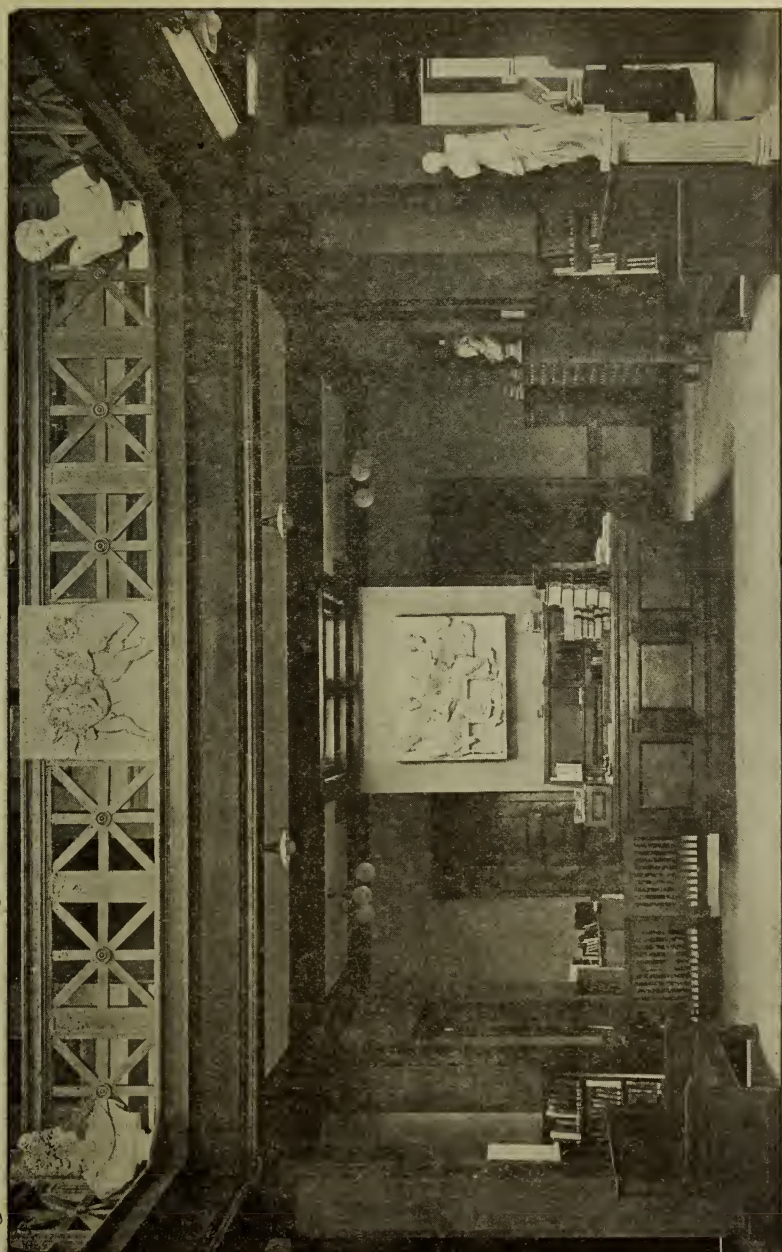
10.00-10.20, Chapel

THE LIBRARY OF THE
JAN 8 1931

1931 JAN 8 1931

TIME	HISTORY	LATIN	MATHEMATICS	PHYSICS	SPANISH
7:30		12s Horace	As Algebra— Teachers' Course 10s Desc. Astron.	2s College Physics 3s Lab. Physics Elem. Lab. Adv. Lab.	9s S. A. Countries
8:20	1s Med. Hist.	8s Teachers' Course	Bs Geom.—Teachers' Course 3s College Alg.	3s Lab. Physics Elem. Lab. Adv. Lab. Teachers' Course	1s El. Spanish
9:10	3s Eng. Hist.		2s Solid Geom. 6s Anal. Geom.	3s Lab. Physics Elem. Lab. Adv. Lab.	2s El. Spanish
10:20		10s Cicero	1s Plane Trig. 7s Diff. Calc. 53s Adv. Math.	3s Lab. Physics Elem. Lab. Adv. Lab.	4s Comp. and Conv.
11:10	55s U. S. Hist.	51s Latin Prose or 3s Latin Prose	8s Int. Calc. 101s Th. of Functions	1s College Physics	61s Spanish Drama

10.00-10.20, Chapel



INTERIOR OF THE LIBRARY

C
M 2825
1922

The Maine Bulletin

Entered at the Post Office at Orono as second class matter

Published monthly during the academic year

Vol. XXIV

University of Maine, Orono, Maine, March, 1922

No. 8

ANNOUNCEMENT
OF THE TWENTY-SECOND
SUMMER SESSION



THE LIBRARY OF THE
JAN 8 1931

UNIVERSITY OF MAINE

JUNE 26-AUGUST 4

1922

PRINTED AT THE
UNIVERSITY PRESS
ORONO, MAINE

ANNOUNCEMENT
of the
TWENTY-SECOND
SUMMER SESSION

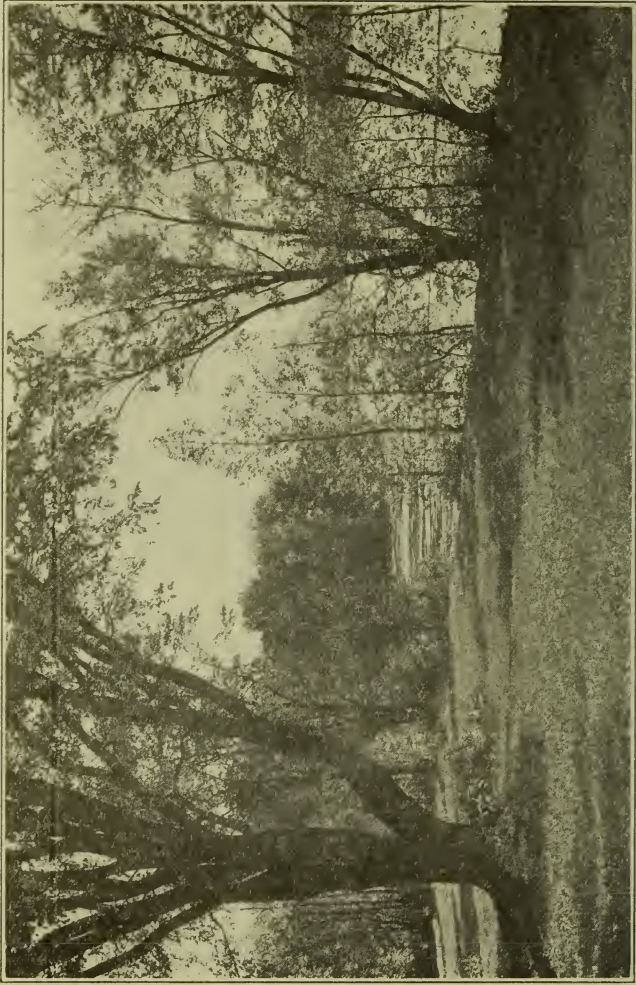


THE LIBRARY OF THE
JAN 8 1931
UNIVERSITY OF MAINE

UNIVERSITY OF MAINE

JUNE 26-AUGUST 4
1922

PRINTED AT THE
UNIVERSITY PRESS
ORONO, MAINE



BESIDE THE STILLWATER

JUNE							JULY							AUGUST						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
				1	2	3							1			1	2	3	4	5
4	5	6	7	8	9	10	2	3	4	5	6	7	8	6	7	8	9	10	11	12
11	12	13	14	15	16	17	9	10	11	12	13	14	15	13	14	15	16	17	18	19
18	19	20	21	22	23	24	16	17	18	19	20	21	22	20	21	22	23	24	25	26
25	26	27	28	29	30		23	24	25	26	27	28	29	27	28	29	30	31		
							30	31												



A CAMPUS VIEW

LOCATION

The University of Maine is situated in the heart of the state which, by reason of the beauty of its forests, seacoast, lakes, and mountains, has earned the title "The Playground of America." The University campus is beautifully situated, overlooking the Stillwater River, a branch of the Penobscot, and with its ivy-covered buildings and walks shaded with evergreens, is one of the most attractive summer spots in New England.

The University town, Orono, is easily accessible from all parts of the state, being in direct communication by electric and steam railways with the city of Bangor, eight miles down the river, and Old Town, four miles above. Strangers who arrive by trolley should alight at University Station, rather than Orono village, for convenience. Students coming from southern New England or the Middle or Southern States may have one of the most enjoyable water trips in America by taking the steamboat at Boston and sailing up the beautiful Penobscot Bay and River in the morning and early forenoon.

SUMMER SESSION FACULTY

JAMES STACY STEVENS

Physics

DIRECTOR OF THE SUMMER SESSION

B.S., Rochester, 1885; M.S., Syracuse, 1889; LL.D., Rochester, 1907; Instructor in Sciences, Cook Academy, Havana, N. Y., 1886-1891; professor of physics, Maine, 1891—; dean of the College of Arts and Sciences, 1905—.

JAMES NORRIS HART

Mathematics

B.C.E., Maine, 1885; C.E., 1890; M.S., Chicago, 1897; Sc.D., Maine, 1908. Principal, Dennysville High School, 1885-86; instructor in mathematics and drawing, Maine, 1887-1890; professor of mathematics and astronomy, 1891—; dean of the University, 1903—.

GEORGE DAVIS CHASE

Latin

A.B., Harvard, 1889; A.M., 1895; Ph.D., 1897. Sub-master, Bristol Academy, Taunton, Mass., 1889-94; assistant professor of comparative philology, Cornell, 1899-1900; instructor in Latin, Wesleyan, 1901-02; associate professor, 1902-05; professor of Latin, Maine, 1905—.

CAROLINE COLVIN

History

B.A., Indiana, 1893; Ph.D., Pennsylvania, 1901. Teacher in Fort Wayne, Indiana, High School, 1893-98; instructor in history, Maine, 1902-03; assistant professor, 1903-06; professor, 1906—.

MINTIN ASBURY CHRYSLER

Biology

B.A., Toronto, 1894; Ph.D., Chicago, 1904. Instructor in botany, Harvard, 1904-07 and summers of 1906-09; instructor, Prince Edward's Island Summer School, 1915; associate professor of biology, Maine, 1907-10; professor, 1910—.

ROY MERLE PETERSON

Spanish

A.B., Coe, 1906; A.M., Harvard, 1910; Ph.D., 1912. Teacher in Oskaloosa, Iowa, High School, 1906-07; instructor, Eureka College, 1907-09; professor of Latin, Missouri Valley College, 1912-14; professor of Spanish and history, Cooper College, 1914-15, 1917-18; professor of Spanish and Italian, Maine, 1918—.

HARLEY RICHARD WILLARD

Mathematics

B.A., Dartmouth, 1899; M.A., 1902; M.A., Yale, 1910; Ph.D., 1912. Instructor in mathematics, Kenyon Military Academy, Ohio, 1902-04; instructor in mathematics, Maine, 1904-07; assistant professor, 1907-

09, 1912-13; instructor, Yale, 1911-12; associate professor, Maine, 1913-19; professor, 1919—.

JOHN H. ASHWORTH

Economics and Sociology

A.B., Emory and Henry, 1906; Ph.D., Johns Hopkins, 1914. Principal of high school, Wise, Va., 1906-11; instructor in economics, Pennsylvania State College, 1914-15; professor of economics, Pennsylvania College, 1915-18; Ohio Wesleyan University, 1918-19; professor of economics and sociology, Maine, 1919—.

CHARLES ANDREW BRAUTLECHT

Chemistry

Ph.B., Yale, 1906; Ph.D., 1912. Chemist, Connecticut Agricultural Experiment Station, 1906-09; instructor in chemistry, California Institute of Technology, 1912-13; professor of chemistry, Florida State College, 1913-19; professor of chemistry, Maine, 1919—.

HAROLD MILTON ELLIS

English

B.A., Maine, 1907; M.A., 1908; A.M., Harvard, 1909; Ph.D., 1913. Instructor in English, Muhlenberg College, 1909-11; University of Texas, 1913-17; professor of English, Trinity College, N.C., 1917-19; North Carolina, summer, 1919; professor of English, Maine, 1919—.

LUTHER JOHN POLLARD

Education

B.A., Lawrence College, 1910; M.A., Wisconsin, 1915. Superintendent of schools, Williams Bay, Wisconsin, 1910-13; principal, Marengo, Illinois, High School, 1913-14; professor of education, Lombard College, 1915-20; professor of education, Maine, 1920—.

ALBERT LEWIS FITCH

Physics

A.B., Albion College, 1911; A.M., 1912; Ph.D., Michigan, 1916. Science teacher in Allegan, Michigan, High School, 1913-15; research physicist, Western Electric Co., New York City, 1916-19; associate professor of physics, Maine, 1919-20; professor, 1920—.

IRVING HILL BLAKE

Biology

A.B., Bates, 1911; A.M., Brown, 1912. Instructor in zoology and physiology, Oregon Agricultural College, 1914-16; instructor in zoology, Syracuse, 1917-18; associate professor of zoology, Maine, 1918—.

BERTRAND FRENCH BRANN

Chemistry

B.S., Maine, 1909; M.S., 1911; M.S., Massachusetts Institute of Technology, 1912. Instructor in chemistry, Maine, 1910-11; Lowell Textile School, 1913-17; assistant professor, Maine, 1917-19; associate professor, 1919—.

AVA HARRIET CHADBOURNE

Education

A.B., Maine, 1915; A.M., 1918. Principal in Maine high and graded schools 1900-11; district superintendent, 1911-14; instructor in education, Maine, 1915-19; associate professor, 1919—.

FRANÇOIS JOSEPH KUENY

French

B. ès L., Paris, 1897; L. ès L., Besançon, 1901. Professeur de seconde, Besançon, 1900-03; Juilly, 1904-07; head of Berlitz School of Languages, Cincinnati, 1908-09; instructor in Romance languages, Maine, 1914-16; assistant professor of French, 1916-20; associate professor, 1920—.

HOWARD WATSON FLACK

Physical Education

A.B., Syracuse, 1914. Coach of track and basketball, Miami University, 1914-15; summer coaching courses, 1915; physical director, city schools, Sapulpa, Okla., 1915-16, 1919-20; coach of football, Louisiana Industrial College, 1916; coach of baseball, Oregon Agricultural College, 1917; associate professor of physical education and coach of track and baseball, Maine, 1920—.

JASON LESLIE MERRILL

Chemistry

Ph.B., Colby, 1901; B.S., Massachusetts Institute of Technology, 1905. Chemist and technologist, pulp and paper laboratories of U.S. Forest Service, Bureau of Chemistry, and Bureau of Plant Industry, 1908-19; associate professor of chemistry, Maine, 1920—.

LESTER SAUNDERS HILL

Mathematics

B.A., Columbia, 1913; M.A., 1911. Assistant professor of mathematics, Montana, 1914-14; instructor in mathematics, Princeton, 1915-16; associate professor of mathematics, Maine, 1920—.

RUFUS WILLIAM McCULLOCH

English

A.B., Guilford College, 1903; A.B., North Carolina, 1906; A.M., 1911; A.M., Harvard. 1913. Principal of Alpharetta, Ga., High School, 1903-04; adjunct professor of English, Georgia School of Technology, 1906-10; professor of English, Daniel Baker College, Texas, 1911-16; acting professor, Sweet Briar College, Va., 1919-20; assistant professor of English, Maine, 1920—.

MARION STEPHANIE BUZZELL

French

B.A., Maine, 1914; M.A., 1915. Teacher of French, Berlin High School, New Hampshire, 1917-19; instructor in French, Mainé, 1919—.

SHERMAN JEWETT GOULD

Physics

B.S., Bates, 1916. Teacher of general science, Madawaska Training School, 1916-17; instructor in physics, Maine, 1920—.

MARION KATHARYN BRAGG English

SECRETARY TO THE DIRECTOR

B.A., Maine, 1921. Instructor in English, Maine, 1921—.

GEORGE MERVIL SEELEY Chemistry

A.B., Bates, 1913. Instructor in science, Shelton, Conn., High School, 1914-16; instructor in Chemistry, Maine, 1921—.

RUFUS STICKNEY Commercial Subjects

Burdett College, 1909. Instructor, Burdett College, 1908-17; head of commercial department, Chelsea, Mass., High School, 1918-20; Arlington, Mass., High School, 1921—.

VICTORIA OLIVE WEEKS Director of Social Activities

B.A., Maine, 1919. Teacher in Winthrop, Mass., High School, 1919—.

RAYMOND LOWREY WALKLEY Librarian

B.A., Yale, 1909; M.A., 1910; B.L.S., New York State Library School, 1913.

INEZ BOWLER Assistant Librarian

A.B., Colby, 1907; B.S., Simmons, 1910.

LOUISE HENDRICKSON Superintendent of Balentine Hall

Special Lecturers in Education

AUGUSTUS ORLOFF THOMAS, PH. D. State Superintendent of Public Schools

JOSIAH WILLARD TAYLOR, A. B. State Agent for Secondary Education

Committees of the Faculty

CHAPEL: Stevens, Ellis, Chrysler.

SOCIAL: Miss Weeks, Kueny, Miss Buzzell, Miss Chadbourne.

ATHLETICS: Flack, Pollard, Fitch, Brann.

REGISTRATION: Chase, Ashworth, Brautlecht.

ATTENDANCE: Peterson, Willard, McCulloch.

BULLETIN: Ellis, Kueny, Bragg.

ADVERTISING: Kueny, Pollard, Miss Buzzell.



THE LIBRARY

THE TEACHERS' UNIVERSITY

The University of Maine Summer Session is primarily an institution for the benefit and advancement of teachers. It furnishes the best means by which the State University, the highest stage of the state educational system, can be brought into direct and useful connection with the lower and secondary schools of the state.

At the end of a hard year's work in June most teachers feel the need of change and recreation during the summer months. On the other hand, the desire for promotion in their profession naturally prompts them to some extra effort in the vacation period, tending toward their advancement. The increasing and reasonable requirements of school systems and superintendents now call for frequent attendance at institutions of higher learning for the refreshing and extension of the teachers' mental equipment. The situation with particular respect to the State of Maine is well expressed in the following authorized statement by the Honorable Augustus O. Thomas, State Superintendent of Public Schools:

"In order to keep abreast of the times and the rapid advance in material and method, a teacher must spend one summer in three in a school

which has for its purpose teaching of advanced professional ideals. I am striving as rapidly as possible to secure a college graduate with specialization in education for every high-school teaching position in the State. Secondary School Certificates will be renewed upon evidence of attendance at the University, either in regular or in summer terms."

The University Summer Session of 1922 will meet excellently both these natural desires of teachers. The campus and its environment offer opportunities for healthful recreation which it is hard to surpass, while the courses outlined in the following pages will help toward the teacher's intellectual and professional improvement and advancement.

ADVANTAGES FOR SPECIAL GROUPS

The following groups will find work to suit their special needs:

(1) *Superintendents.* Superintendents of schools and teachers or students preparing to be superintendents will find courses in all professional subjects which the State Department of Education requires in the examination of superintendents. Superintendents' clubs will be organized for the purpose of discussing practical problems. Up-to-date plans of educational organization and administration will be available. The members of this group may be excused for necessary absence from classes in order to attend the annual Superintendents' Conference, to be held this year at York Beach, June 29 and 30.

(2) *Secondary School Teachers.* Secondary school teachers or prospective secondary school teachers will find the courses which they require in both professional training and subject matter. This is particularly applicable for junior and senior high-school teachers who desire to prepare themselves for better positions in more advanced work.

(3) *Normal School Graduates.* Graduates of Maine normal schools who have graduated from an accredited high school may, by a recent regulation of the University, earn the degree of Bachelor of Pedagogy by completing two years of University work. Students who desire to complete this curriculum may do a considerable part of the work in the Summer Session. A number of normal school graduates are already taking advantage of this arrangement.

(4) *Graduate Students.* Graduates of the University of Maine and other institutions of equal grade, whether teachers or not, may register for work in consecutive summer sessions in several departments of the University which will lead to the degree of Master of Arts. Attendance at four sessions will normally be required to fulfil the requirements for the degree. A student who is able to spend only one semester in resident graduate study at the University may complete his necessary work in two summer sessions. Credit for graduate courses taken in the summer session may ordinarily be transferred for students working towards advanced degrees in other universities.

REQUIREMENTS FOR PROFESSIONAL STATE CERTIFICATES

The Summer Session will so far as possible offer facilities to teachers toward completing the program of courses arranged by the College of Arts and Sciences of the University and the State Superintendent of Public Schools which will entitle those who complete it to a Professional State Certificate for Secondary School Teachers. The detailed requirements for earning the certificate are the following:

In addition to fulfilling the general requirements leading to the degree of Bachelor of Arts, the student is expected to complete three hours elective in psychology, three hours in Educational Psychology, twelve other hours in education in the junior and senior years, thirty hours in a major subject, and from ten to twenty hours in a minor subject. The prescribed courses in education, namely, the History of Education, Educational Psychology, and Methods of Teaching, are all given in the Summer Session.

Nearly all teachers in Maine high schools must teach a combination of allied subjects rather than one major subject. The selection of a major subject to which the student devotes thirty hours and a minor subject to which he devotes from ten to twenty hours is designed to meet this situation. Usual combinations of high-school subjects are English and history, Latin and history, English and Latin, English and modern languages, Latin and modern languages, mathematics and physics, physics and chemistry. For the completion of this course a high standard of scholarship is required. All the prescribed work must be of C grade or above. Upon completing this course the student will receive a Professional Secondary Certificate from the State Department of Public Instruction, which will designate the major and minor subjects he has pursued. A special certificate will also be issued by the University, which will give a detailed outline of the student's record.

Details of the plan and an outline of the course extending through several summer sessions will be sent upon inquiry to those who are interested.

REQUIREMENTS FOR DEGREE OF BACHELOR OF PEDAGOGY

Graduates of Maine normal schools who have completed a course in a class A high school and have had one year of successful experience in teaching are admitted to the University as candidates for the degree of Bachelor of Pedagogy. Such students are required to complete with high grade seventy-five semester hours, of which twelve shall be in the Department of Education and a sufficient number of remaining hours shall be devoted to study in some one department to give the student a satisfactory equipment for high-school teaching.

TEACHERS' REGISTRATION BUREAU

The University conducts a registration bureau for teachers and for students who are planning to become teachers. A complete set of blanks is furnished to each applicant, and the University authorities assist the students so far as they are able in obtaining desirable employment. The privileges of this bureau are extended to students in the Summer Session and should prove a valuable aid to teachers who are desirous of obtaining a better position.



THE STILLWATER RIVER

GENERAL INFORMATION

ORGANIZATION

The Summer Session is organized under a distinct faculty, comprising the members of the instructing staff, who are mainly heads of departments and other teachers of professorial rank in the College of Arts and Sciences in the University. The Dean of the College is Director of the Summer Session.

DAILY PROGRAM

Classes are held five days in the week, Mondays to Fridays, inclusive, from 7.30 a. m. until noon. The class periods are fifty minutes in length.

Students and faculty are expected to attend the daily assembly exercise, held in the University Chapel between the third and fourth periods. A brief religious service is followed by a short address, usually on some topic of current interest.



ALUMNI HALL

EQUIPMENT

Buildings

Classes in the Summer Session are held in Alumni, Aubert, Coburn, Estabrooke, Fernald, and Wingate halls. Hannibal Hamlin Hall and Oak Hall are available for dormitory space for men and Balentine Hall for women. Most of the fraternity houses on or adjoining the campus are also open during the Session.

Library

Thruout the Summer Session, the University library of 71,000 volumes, and the reading rooms containing about 500 periodicals and newspapers will be open from 8 a. m. to 12 m. and from 1.30 to 5 p. m. daily, except Saturday afternoons and Sunday. The library privileges ordinarily accorded University students, including the home use of books, are extended to students in the Summer Session.



A SEMINAR ROOM IN THE LIBRARY

Laboratories, Museum, and Observatory

The laboratories of the departments of Biology, Physics, and Chemistry will be available for use of the students. All necessary apparatus is supplied to the student without charge; a small charge is made to cover the cost of material used. The departments are well equipped with modern apparatus.

The Museum, illustrative of the rocks, flora, and fauna of Maine, will be open at stated periods for the use of the students.

The Observatory contains an eight-inch telescope, a vertical circle, and other instruments of precision.

RECREATION

Alumni Field, the athletic field of the University, will be available for those who wish to enjoy outdoor exercise; and two afternoons each week, from four o'clock to six, will be set aside for baseball games and other athletic contests. The numerous tennis courts on the campus will be utilized for a tennis tournament. The Stillwater River, which bounds the campus on the west, affords canoeing and swimming.

Under the management of a committee appointed for that purpose, tramps, picnics, and longer trips to neighboring places of interest will be arranged, as well as more informal occasions on the campus at which the students will have opportunity to meet one another and the members of the faculty.

Orono and the surrounding country offer unsurpassed opportunities for tramping, canoeing, fishing, motoring, and week-end trips.

Pushaw Lake, six miles from the campus, offers an ideal day's outing. Canoes may be rented at the Niben Club or at Gould's Landing. Chemo Lake, at the head of Chemo Stream, can be reached by canoe after a two-mile tramp from the campus, and crossing the Penobscot River by ferry. Canoes may be hired from the ferryman. Gilman Falls, the old Veazie Railroad, and Poplar Knoll are all delightful sites for picnic parties.

Bar Harbor, Maine's popular summer resort, is easily reached from Orono, and a trip to Mt. Katahdin, Maine's highest mountain, is well worth an extra week in the state. Historic Castine is reached after a four-hour sail down the Penobscot River; and Northport, Camden, and Rockland are reached by the Boston boat, which makes daily trips from Bangor. The Indian Reservation at Old Town, where Indian-made snowshoes, baskets, and moccasins may be purchased, attracts many summer visitors.

For the further entertainment of the Summer Session students and their friends, the gymnasium will be opened one evening of each week, when music will be furnished and opportunity afforded for informal social intercourse.

The social life of the Summer Session and the athletic interests are in charge of committees composed of members of the faculty and the student body.

PUBLIC HEALTH TRAINING

Every educator should be equipped to do his or her part in the nationwide campaign in behalf of public health. The Department of Biology will this summer offer a practical course of instruction designed to enable educators and all others interested in public health to cooperate with the agencies now at work in our state. The active assistance of the State Department of Health in giving this course is promised.

EXPENSES

Tuition

Tuition for the session of six weeks, covering all charge for instruction up to fifteen hours a week, and the use of the library and laboratories, except a small additional fee covering cost of materials used in the laboratories:

For residents of Maine, \$20.00.

For residents of other states, \$25.00.

An additional charge of \$1 an hour is made for registration in excess of fifteen hours a week.

Rooms in the Dormitories

Rooms for men in Hannibal Hamlin Hall and Oak Hall and for women in Balentine Hall may be obtained for \$2.00 a week for a single person, or for \$1.00 each when more than one occupy a room. Students should furnish pillows and pillow cases, sheets, and towels.

Meals

Meals will be served in the dining room of Balentine Hall for men and women at a cost of \$7.00 a week.

The University Inn, located in the village of Orono, is under University management and is open for summer students. Rooms in private families may be secured by those who prefer them.

Men who wish to bring their families should write early. Special effort will be made to secure suitable accommodations.

Self Boarding

An effort will be made to meet the needs of students who may wish to reduce expenses by forming clubs and doing light housekeeping. Tenting on the campus has proved attractive to some students.

SPECIAL REGULATIONS

Registration

The maximum registration allowed without special permission is fifteen hours a week, equivalent to three new courses for which credit for two semester hours each is allowed, or two new courses for which credit for three semester hours each is allowed. All cases of over-registration must be passed upon by the Committee on Registration.

Examinations

Final examinations will be scheduled in two-hour periods, beginning Thursday at 7.30 a. m. and ending Friday noon.

Absences

Students who have had three or more absences from a class which meets five times a week or a like proportion of absences from classes which are scheduled for a lesser number of hours a week must present excuses for all their absences to the Committee on Attendance before 4 p. m. of the last Wednesday of the Session. If they desire, they may appear personally before the committee to present their excuses.

COURSES OF INSTRUCTION

GENERAL STATEMENT

Courses in the Summer Session may be elected either for credit or without credit by any properly qualified student of the Session. Undergraduate students in the University may obtain additional credit toward their degree or may remove deficiencies in the Summer Session. Students at other colleges and universities may have their credits gained in the Summer Session transferred to their own institutions. In the summer of 1921, fifty such students from Dartmouth, Wesleyan, and other colleges attended the University on this basis.

Most of the departments of the Summer Session offer courses primarily for graduates, which may be counted toward satisfying the requirements for the Master's Degree in the University or at other universities.

A course, unless otherwise specified, meets five periods a week and entitles the student to two semester hours' credit. Courses which are scheduled for more or less than five periods a week will be estimated upon the proper time basis. Courses taken in review may be credited for their original semester value.

In case the registration for any course falls below a certain minimum, it may be withdrawn.

The courses are in most cases given numbers which correspond with those in the University catalog, with the letter *s* added. Advanced courses are numbered above 50 and courses primarily for graduates, above 100.

ADDITIONAL COURSES

Courses in German, music, and psychology, and additional courses in the departments represented in this bulletin may be offered if there is sufficient demand for them. Prospective students are invited to correspond or confer in advance with the Director or the heads of the departments in which they are interested, concerning their program of study.

COURSES BY DEPARTMENTS

BIOLOGY

PROFESSOR CHRYSLER; ASSOCIATE PROFESSOR BLAKE

The facilities of the Department of Biology are this year made available to Summer Session students. In choosing the work to be offered, the staff has kept in mind the need for better high-school instruction in biology (course 3s), the open field for cooperation in public health work (course 18s), and the desire of the general student for a knowledge of the most progressive branch of biology (course 12s). All of these courses are particularly designed to be useful to teachers.



3s. THE PRINCIPLES AND METHODS OF TEACHING BIOLOGY.—A course designed for those who are expecting to teach biology, and for teachers of the subject who may wish to extend their preparation. Class, laboratory, and field work, dealing with subject matter, methods of presentation, lab-

oratory equipment and procedure, collection and preservation of animal and plant material, and the preparation of experiments and demonstrations. *Fifteen hours weekly; four credits.* MR. CHRYSLER and MR. BLAKE

12s. HEREDITY AND EUGENICS.—A study of inheritance in plants and lower animals, followed by the application of the principles thus established to the problem of inheritance in man, with its eugenic applications. Text-book and illustrated lectures. No previous knowledge of biology is assumed. MR. CHRYSLER

18s. PUBLIC HEALTH.—A practical course including class-room, laboratory, and community work, designed to enable school superintendents, high-school principals and others actively to assist public health authorities in carrying on their work. Among the topics to be treated are: prevention of infectious diseases, control of contact and insect-borne diseases, practical use of disinfectants, ventilation, foods and their contamination, water supplies, sewage disposal, rural hygiene, child hygiene. *Ten hours weekly; three credits.* MR. CHRYSLER and MR. BLAKE

CHEMISTRY

PROFESSOR BRAUTLECHT; ASSOCIATE PROFESSOR BRANN; ASSOCIATE

PROFESSOR MERRILL; MR. SEELEY

Only a few courses are listed. Correspondence concerning other chemistry courses and courses in pulp and paper chemistry and technology should be sent to the Chemistry Department *at the earliest possible date*, as some classes must be limited in size. Such courses will be given if sufficient demand is shown to exist by June 15.

During the summer of 1921, three of the regular pulp and paper courses were given and well attended. Further announcements regarding these and regular chemistry courses will be made in trade journals and the scientific and general press and in a special bulletin to be issued about April 1.

1-5s. GENERAL CHEMISTRY.—Lectures and laboratory work in general chemistry. No previous knowledge of the subject is assumed. The course, however, is so developed as to serve also as a review. The course deals chiefly with the non-metals. *Fifteen hours weekly; four credits.*

MR. BRAUTLECHT and MR. SEELEY

2-6s. GENERAL CHEMISTRY.—A continuation of 1-5s, dealing chiefly with the metals. *Fifteen hours weekly; four credits.*

MR. BRANN and MR. SEELEY

1,2—5, 6s. GENERAL CHEMISTRY.—A course giving in one summer session the fundamentals of general chemistry as usually conducted in a first-class institution, pursued on an intensive and exclusive basis. Special permission to take this course must be secured from the Committee on Registration and will be granted only to such candidates as have demon-

strated high scholarship in science and mathematical subjects. *Thirty hours weekly; eight credits.*

MR. BRAUTLECHT, MR. BRANN, and MR. SEELEY

11s. QUALITATIVE ANALYSIS.—A systematic study of reactions and separation of the common metals and acids. The character of this course can be made to meet the needs of individual students. General Chemistry is a prerequisite. *Twenty-five hours weekly; six credits.* MR. BRANN

16s. ORGANIC CHEMISTRY.—A course designed for those who desire an elementary knowledge of organic chemistry, especially for teachers and pre-medical students. It is regarded as the equivalent of Ch 16 in the regular session, for pre-medical students. *Twenty hours weekly; five credits.* MR. BRAUTLECHT

74s. PHYSICO-CHEMICAL MEASUREMENTS.—The determination of molecular weights; the study of solutions through conductivity and other methods; the use of such instruments as the spectroscope, the polariscope, and the refractometer. *Ten hours weekly; five credits.* MR. BRANN

111s. THE TEACHING OF CHEMISTRY.—For teachers and properly qualified prospective teachers of chemistry. Study and informal discussion of both laboratory and classroom methods. The course will deal with the more important phases of general chemistry, methods of preparing solutions, purchase and maintenance of equipment and supplies, etc. *Five hours weekly; two credits.* MR. BRAUTLECHT

(All courses in Pulp and Paper Making will be taught by Mr. Merrill)

ECONOMICS AND SOCIOLOGY

PROFESSOR ASHWORTH; MR. STICKNEY

Courses 10s and 15s are designed primarily for teachers of commercial subjects in high schools. If there is sufficient demand, a course in type-writing will be given.

7s. GEOGRAPHY AND INDUSTRY.—A brief study of the resources of the world; agricultural, mining, forest, fishing, and animal industries; means of transportation and communication. Emphasis upon the resources and production in the United States. MR. STICKNEY

10s. ADVANCED ACCOUNTING.—Partnership and corporation accounting; balance and income sheets; depreciation, reserve, sinking fund, and investment accounting; advanced form of final statements; realization and liquidation. MR. STICKNEY

15s. METHODS OF TEACHING SHORTHAND.—Some of the topics considered are: Methods of teaching the theory of shorthand; methods of teaching shorthand penmanship; methods of increasing the student's speed; how to give and grade an examination; how to hold the student's interest; how to dictate to a class. Prerequisite for this course, Elementary Gregg Shorthand or its equivalent. MR. STICKNEY

20s. COMPARATIVE GOVERNMENT.—A study of modern democracies: a historical survey of the development of democracies; constitutions and constitution-making; parliamentary versus the presidential system of government; problems of legislative, executive, and judicial organization and methods; political parties; popular control of government. Special attention is given to the more recent problems of democracy. MR. ASHWORTH

88s. INTERNATIONAL RELATIONS.—A survey of the development of international relations, with special attention to world politics since 1914; foreign economic and political policies of the United States; recent economic policies of various governments in their relations to world affairs; practical problems, such as international indebtedness, exchange, and the tariff. MR. ASHWORTH

EDUCATION

PROFESSOR POLLARD; ASSOCIATE PROFESSOR CHADBOURNE

Courses 51s and 77s are required for the Professional State Certificate for Secondary School Teachers.

21s. INTRODUCTION TO EDUCATIONAL PSYCHOLOGY.—A general treatment of the elements of psychology in their application to education MR. POLLARD

51s. HISTORY OF EDUCATION IN THE UNITED STATES.—Evolution of education, educational institutions, school systems and practices of the American people. MISS CHADBOURNE

64s. STATE SCHOOL SYSTEMS.—A study of the principles of organization and of the typical agencies for the administrative control of American state educational systems. MR. POLLARD

72s. PSYCHOLOGY OF HIGH-SCHOOL SUBJECTS.—A psychological analysis of various high-school courses as to their importance and organization; reasons for reorganization of some of these courses as discussed in recent educational writings. MISS CHADBOURNE

77s. METHODS OF TEACHING.—A general methods course for high-school teachers, including drill and habit formation, questioning, lesson plans, and presentation of material. MISS CHADBOURNE

92s. PSYCHOLOGY OF ELEMENTARY SCHOOL SUBJECTS.—A study of the methods by which children learn to read, write, draw, spell, and grasp the meaning of other elementary subjects. MR. POLLARD

97s. CURRENT PROBLEMS IN EDUCATION.—In this course each student will take some definite problem and report on that problem from time to time in the class work. MR. POLLARD

115s. SEMINAR—EDUCATIONAL ADMINISTRATION.—This course is especially fitted for superintendents and principals who wish to work out definite plans in organization and administration of their school systems. MR. POLLARD

ENGLISH

PROFESSOR ELLIS; ASSISTANT PROFESSOR McCULLOCH; MISS BRAGG

1s. COMPOSITION AND RHETORIC.—This course is the equivalent of the regular work of the fall semester of the freshman year in the University. A review of the fundamentals of good writing, sentence structure, and paragraphing, with a study of the expository type of composition. Frequent themes and conferences. MISS BRAGG

2s. COMPOSITION AND RHETORIC.—This course corresponds to the work of the spring semester of the freshman year. Stress is laid upon narration and description. MR. McCULLOCH

21s. TEACHING OF ENGLISH IN THE GRAMMAR SCHOOL.—Grammar, composition, and literature of the usual grammar-school curriculum in English in the State of Maine. Theory and practice of grammar in oral and written work, rapid reading of a few masterpieces, and intensive study of short selections to cultivate understanding, appreciation, and methods of presentation. MR. McCULLOCH

22s. TEACHING OF ENGLISH IN THE HIGH SCHOOL.—Several representative classics from the ordinary high-school English curriculum will be reviewed intensively from the teacher's viewpoint, with the purpose of cultivating the teacher's own appreciation and understanding of literature and of suggesting effective methods of presentation. Compositions will be written and the problems of correcting and grading studied. MR. ELLIS

33s. SHAKESPEARE.—A study of Shakespeare's background and development and of a few representative plays. Several others are required to be read. MR. ELLIS

41s. THE SHORT STORY IN AMERICA.—A study of ten or more representative American writers of the short story from Washington Irving to William Sidney Porter (O. Henry). MR. McCULLOCH

80s. ROMANTIC POETS.—A study of the poetry of Burns, Wordsworth, and Byron, as illustrating the progress and character of the Romantic Movement in English poetry. MR. ELLIS

FRENCH

ASSOCIATE PROFESSOR KUENY; MISS BUZZELL

In all French courses pronunciation and classroom expressions are featured.

1s. ELEMENTARY FRENCH.—For beginners and those who wish to review the elements of French grammar. Recommended to teachers who teach French as a second subject. MISS BUZZELL

5s. ADVANCED FRENCH.—Open to students who have had three years of secondary school French. Rapid reading, composition and conversation. MISS BUZZELL

7s. **ELEMENTARY CONVERSATION AND COMPOSITION.**—Open to students who have studied an elementary grammar. Conducted in French and designed to enable the student to make ready use of simple French phrases. Special attention is given to pronunciation and class-room expressions.

MISS BUZZELL

13s. **HOW TO TEACH FRENCH TEXTS.**—The selection of secondary school texts. How to read and explain a text. What use to make of notes, vocabularies and direct-method exercises. The text considered as the proper material in which to review the rules of grammar.

MR. KUENY

59s. **HOW TO WRITE FRENCH.**—An advanced course in composition. Retranslation exercises and themes in French.

MR. KUENY

112s. **FRENCH POETS OF THE FIRST HALF OF THE NINETEENTH CENTURY.**—A study of the romantic movement. How to understand and how to read the French lyric and epic poets: Victor Hugo, Alfred de Vigny, Lamartine, Alfred de Musset.

MR. KUENY

HISTORY

PROFESSOR COLVIN; PROFESSOR ASHWORTH

2s. **MODERN EUROPEAN HISTORY.**—From about 1500 to the present time. This is the same as Hy 2 in the regular session, given more briefly and with two hours' credit instead of three.

MISS COLVIN

4s. **HISTORY OF ENGLAND.**—From 1603 to the present time. Practically the same as Hy 4 in the regular session.

MISS COLVIN

55s. **UNITED STATES HISTORY.**—This course will begin with our efforts to obtain recognition as an independent republic and follow foreign relations to the present time, making a special study of the attitude of public opinion.

MISS COLVIN

60s. **SOCIAL AND INDUSTRIAL HISTORY OF THE UNITED STATES.**—This course is planned in connection with courses in economics and sociology and is equivalent to Hy 60 in the regular session. It begins with early colonial history.

MR. ASHWORTH

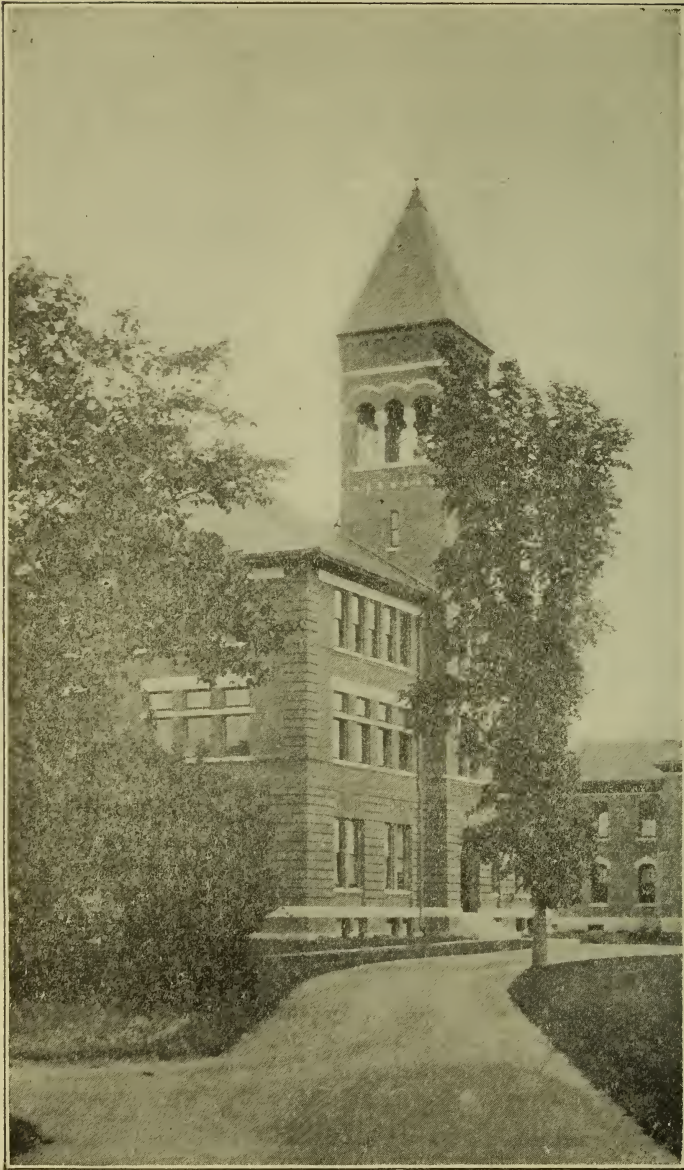
LATIN

PROFESSOR CHASE

8s. **TEACHERS' COURSE.**—A discussion of methods and problems of teaching in the several years of the high-school course. Study of topics from Caesar, Cicero, and Vergil. Intended for those who are teaching or who expect to teach secondary school Latin.

51s. **LATIN COMPOSITION.**—Practice in writing Latin, with a careful review of Latin grammar.

101s. **HISTORY OF ROMAN LITERATURE.**—Illustrated by lectures and readings.



WINGATE HALL

MATHEMATICS

PROFESSOR HART; PROFESSOR WILLARD; ASSOCIATE PROFESSOR HILL

Eight or more of the courses listed will be given, the choice of subjects depending upon the number of students electing them. All who can do so are requested to indicate their choice before the opening of the Session.

Courses As and Bs are planned to meet the needs of high-school teachers who wish to review the subjects or to study methods of teaching. Courses 1s, 3s, 6s, 7s, and 8s should appeal to teachers of high-school mathematics who wish to extend their field of mathematical knowledge or to become candidates for a degree.

The department is supplied with a small but carefully selected set of mathematical models, and for work in astronomy has an observatory equipped with an eight-inch Clark equatorial, a three-inch Bamberg astronomical transit, and other instruments.

As. TEACHERS' COURSE IN ALGEBRA.—A course intended for teachers in preparatory schools, dealing chiefly with the second year's work. Special attention will be given to the methods of presenting the subject, and those topics will be emphasized that are most important in preparation for college work. MR. WILLARD

Bs. TEACHERS' COURSE IN GEOMETRY.—A review of the more important theorems, with practice in the demonstration of original propositions and in the solution of numerical exercises. Discussion of text-books and of methods of presenting the subject. MR. HILL

1s. PLANE TRIGONOMETRY.—The elements of plane trigonometry, including the solution of right and oblique plane triangles, and of problems in surveying, together with the use of surveying instruments. Those having logarithmic tables should bring them, and also any modern text-book on trigonometry which may be useful for reference. MR. HART

2s. SOLID GEOMETRY.—This course is offered especially for the benefit of students who intend to enter college but have not been able to complete the requirements in solid geometry. The Stone-Mills Solid Geometry will probably be used as the text-book, but Phillips and Fisher's, Wells's, and other books will be used for reference. MR. HILL

3s. COLLEGE ALGEBRA.—The theory of quadratic equations, the binomial theorem, and so much of the regular freshman course in algebra as time will permit. MR. WILLARD

6s. ANALYTIC GEOMETRY.—A brief course covering the elements of this subject. MR. WILLARD

7s. DIFFERENTIAL CALCULUS.—A course intended for teachers in preparatory schools who desire a knowledge of the elements of this subject. MR. WILLARD

8s. INTEGRAL CALCULUS.—Equivalent to Ms 8 in the regular session. Open only to those who have previously studied the subject. MR. HILL

54s. ADVANCED INTEGRAL CALCULUS.—Equivalent to a part of Ms 54 in the regular session. MR. HART

119s. VECTOR ANALYSIS.—Introduction to important theorems and methods of mathematical physics. MR. HILL

PHYSICAL EDUCATION

ASSOCIATE PROFESSOR FLACK

No University credit will be given for any of the following courses except 13s, but a certificate will be issued indicating the nature, amount, and grade of work completed. Course 13s may be counted for credit toward the degree of Bachelor of Science in Physical Education.

10s. FOOTBALL COACHING.—This course will include a thorough discussion of football rules and officiating; general systems of offense and defense; a thorough outline of types of plays that can be used with inexperienced high-school material and a more advanced type of offense fitted to experienced players; methods of training and conditioning; and the ethics of the game. Some of the work will be practical on the athletic field, but there will be no actual scrimmage.

11s. TRACK AND FIELD ATHLETICS.—A discussion and demonstration of the accepted form for all events, with at least one hour's practical work on each event. General methods of training as applicable to high schools. Treatment of athletic injuries and conditioning of all athletic teams will be covered, in addition to track athletics.

12as. BASEBALL.—This course will deal with the type of game suited to the average high school; the fundamentals of batting and fielding; bunting and general field strategy. Additional time will be given to baseball on the Summer Session team, which will play games in the neighboring towns. *First three weeks.*

12bs. BASKETBALL.—This course follows 12as and will be given at the same hour. The theory of the college game as contrasted with the professional. General systems of offense and defense; the fundamentals necessary for any type of game; and officiating in amateur basketball. *Last three weeks.*

13s. GENERAL CALISTHENICS.—Exercises, schoolroom and gym practice for high-school and grade pupils. Elementary marching and some simple playground games. Open to both men and women. Gymnasium uniforms will be required in this work.

PHYSICS

PROFESSOR STEVENS; PROFESSOR FITCH; MR. GOULD

1s. COLLEGE PHYSICS.—A course based upon those parts of Anderson's College Physics which treat of mechanics, heat, and sound. This

course may be taken for credit only by University students who have covered the ground in Physics 1. MR. FITCH

2s. COLLEGE PHYSICS.—A course based upon those parts of Anderson's College Physics which treat of electricity and light. This course may be taken for credit only by University students who have covered the ground in Physics 2. MR. STEVENS

4s. THE GENERAL LABORATORY COURSE.—The subjects usually included in an undergraduate course. Especial attention is given to the reduction of observations and the tabulation of results. *Five hours; one credit.* MR. FITCH

9s. ELEMENTARY LABORATORY COURSE.—This includes a list of experiments which would be accepted for admission to the University of Maine. The course is especially adapted for teachers who wish to become familiar with the methods of conducting an elementary laboratory course. The complete set of apparatus is assembled in the laboratory, and full directions are given for performing each experiment. Time and credit vary. MR. FITCH

10s. TEACHERS' COURSE.—A course covering the whole ground of elementary physics in a rapid survey. It is planned to be of aid to secondary school teachers, and arrangements may be made so that those to whom this work is a review may obtain college credit in the course for students in the College of Arts and Sciences. MR. STEVENS

51s. ADVANCED LABORATORY COURSES.—These courses are offered in optics, electrical measurements, and heat. They are of a more advanced nature than those in 4s, which is prerequisite for them. Time and credit vary. MR. FITCH

101s. ADVANCED LABORATORY COURSE FOR GRADUATE WORK.—This course will be adapted to the requirements of the students, and will be offered to such students as have completed the courses above listed. The work will be in the nature of a repetition of a published experiment, or it may be an original investigation. Time and credit vary. MR. FITCH



SPANISH

PROFESSOR PETERSON

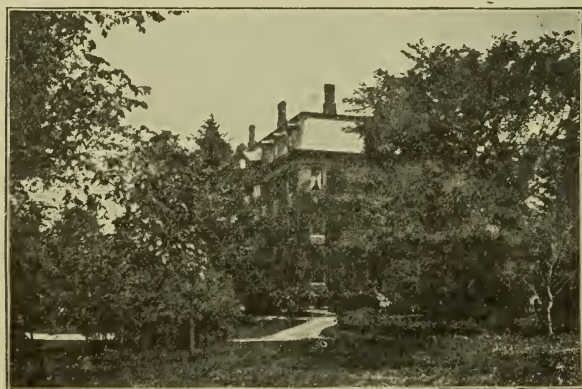
1s. **ELEMENTARY SPANISH.**—Designed for beginners and for those who wish to review the essentials of the language. Drill in pronunciation, oral exercises, and translation.

2s. **ELEMENTARY SPANISH.**—Designed for those who have had the equivalent of one year of high-school Spanish. Grammar, reading, conversation, and composition.

7s. **COMMERCIAL SPANISH.**—The object of this course is to acquaint the student with the forms of private and commercial correspondence and the vocabulary used in the business world. Considerable reading of selections dealing with industrial and commercial life will be required.

9s. **THE SPANISH AMERICAN COUNTRIES.**—This course, which will be conducted wholly in English, will deal with the history and present-day civilization of the Hispanic countries of the New World. The customs and social traditions of the people will be studied, as well as business conditions and commercial opportunities. No knowledge of Spanish is required for this course and it can not be counted to make up language credits.

62s. **THE NINETEENTH CENTURY NOVEL.**—A study of representative works of the period and a sketch of the development of the novel in Spanish.



HR.	¹ BIOLOGY	² CHEMISTRY	ECONOMICS	EDUCATION	ENGLISH	FRENCH
7:30		1-5s Gen. Chem. 2-6s Gen. Chem. 11s Qual. Anal. 16s Org. Chem.	15s Teaching of Shorthand	77s Methods of Teaching 97s Seminar: Current Probs. in Ed.	2s Comp. & Rhetoric	59s How to Write French
8:20	12s Heredity and Eugenics	1-5s Gen. Chem. 2-6s Gen. Chem. 11s Qual. Anal. 16s Org. Chem.	88s International Relations	52s Hist. of Educ. 64s State School Systems	21s Teachers Course (Gram.-school) 22s Teachers Course (High-school)	1s Elementary French
9:10	3s Principles & Methods	1-5s Gen. Chem. 2-6s Gen. Chem. 11s Qual. Anal. 16s Org. Chem.	10s Advanced Accounting	21s Introd. to Ed. Psychology 72s Psychology of H.S. Subjects	41s Am. Short Story	5s Advanced French 13s How to Teach Fr. Texts
10:00	DAILY ASSEMBLY					
10:20	3s Prins. & Methods Lab. 18s Public Health	11s Qual. Anal. 16s Org. Chem. 74s Phys-Chem. Methods	20s Comparative Government	92s Psychology of Elem. School Subjects	1s Comp. & Rhet. 33s Shakespeare	7s Elem. Comp. & Conv. 112s 19th Cent. Poets
11:10	3s Prins. & Methods Lab.	11s Qual. Anal. 74s Phys-Chem. Methods 111s Teaching of Chem.	7s Geog. & Industry	116s Seminar: Educ. Administration	80s Romantic Poets	

¹NOTE: Lab. work in B1 18s, Public Health, will be held Tues. Thurs. 1.30-3.30 p. m.

²NOTE: Ch 1, 2-5, 6s meets throughout all mornings and Mon. p. m.

THE LIBRARY OF THE
JAN 8 1931

Hr.	HISTORY	LATIN	MATHEMATICS	PHYSICAL EDUCATION	
7:30	60s Indust. Hist. of U.S.		As Algebra— Teachers Course		2s College Physics Lab. Physics 9s Spauld-Am. Countries 1s.
8:20	2s Modern History		Bs Geometry— Teachers Course 3s College Algebra	11s Track & Field Events	10s Teachers Course Lab. Physics 2s Elem. Spanish
9:10	4s English History	101s Roman Lit.	2s Solid Geom. 6s Analyt. Geom.	13s Gen. Calisthenics	Lab. Physics 1s Elem. Spanish
10:00			DAILY ASSEMBLY		
10:20		8s Teachers Course	1s Plane Trig. 7s Diff. Calculus 54s Adv. Integral Calculus	10s Football	Lab. Physics 7s Commercial Spanish
11:10	55s U.S. History	51s Latin Comp.	8s Integral Calculus 119s Vector Analysis		1s College Physics Lab. Physics 62s 19th Century Novel

*NOTE: Physical Education 12as and 12bs, Baseball and Basketball, will be held in the afternoon, the hour to be arranged.

APPLICATION BLANK

THE LIBRARY OF THE

JAN 8 1931

Post Office.....UNIVERSITY OF MAINE, 1922

DEAN J. S. STEVENS,

Director of the Summer Session,

University of Maine, Orono, Maine.

Dear Sir:

As it is my intention to attend the 1922 Summer Session of the University of Maine, please reserve for me a room in.....Hall.

(I should like to have as my roommate....., of
....., who also expects to attend
the Summer Session.)

I am particularly interested in the following courses:

.....
.....
.....

Signed.....

NOTE: Rooms thus reserved will be held for the applicants until 6 p. m. of June 26 without further request. If the applicant expects to arrive later than that time, he should so indicate in asking for his reservation. Rooms may be occupied singly or by two students together.

